

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



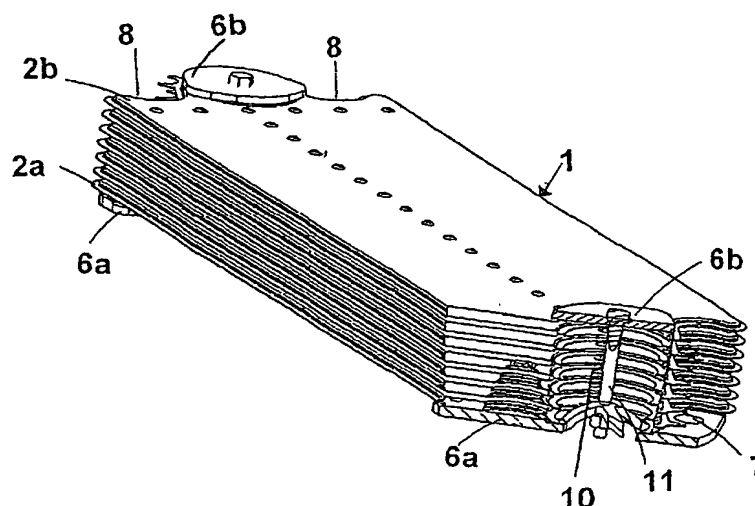
(43) International Publication Date
1 April 2004 (01.04.2004)

PCT

(10) International Publication Number
WO 2004/027334 A1

- (51) International Patent Classification⁷: **F28D 9/00**,
F28F 9/02
- (21) International Application Number:
PCT/EP2003/010417
- (22) International Filing Date:
17 September 2003 (17.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0202747-2 17 September 2002 (17.09.2002) SE
- (71) Applicant (for all designated States except US): **VALEO ENGINE COOLING AB** [SE/SE]; Box 2064 Mjällby, 294 02 Solvesborg (SE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **THUNWALL, Peter** [SE/SE]; Tyketorpsgratan 18, S-614 32 Sokderkopping
- (54) Title: ARRANGEMENT FOR A PLATE HEAT EXCHANGER
- (52) International Patent Classification⁷: **F28D 9/00**,
F28F 9/02
- (53) International Publication Date:
1 April 2004 (01.04.2004)
- (54) Title: ARRANGEMENT FOR A PLATE HEAT EXCHANGER
- (57) Abstract: The present invention relates to arrangement for a plate heat exchanger for connection to a system, of which the plate heat exchanger is designed to form part. The plate heat exchanger is of conventional construction with plates (2) parallel to one another, which constitute a package (1) and between them define flow channels. The outermost plates (2a, 2b) of the package (1) are at each short end partially covered by plate elements (6a, 6b), which essentially lie within the width of the package (1), of which the plate element (6a) situated nearest the system has throughholes (7) for assembly elements, which can be inserted into the holes (7) from above, since the plates (2) are formed with recesses (8). At each short end there are also clamping elements which effectively act between the plate elements (6a, 6b) and are designed to produce a symmetrical clamping force and to hold the package (1) together.
- (74) Agent: **ROLAND, Jean-Christophe**; Valeo Thermique Moteur, 8, rue Louis Lormand, F-78321 La Verrière (FR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]



(57) Abstract: The present invention relates to arrangement for a plate heat exchanger for connection to a system, of which the plate heat exchanger is designed to form part. The plate heat exchanger is of conventional construction with plates (2) parallel to one another, which constitute a package (1) and between them define flow channels. The outermost plates (2a, 2b) of the package (1) are at each short end partially covered by plate elements (6a, 6b), which essentially lie within the width of the package (1), of which the plate element (6a) situated nearest the system has throughholes (7) for assembly elements, which can be inserted into the holes (7) from above, since the plates (2) are formed with recesses (8). At each short end there are also clamping elements which effectively act between the plate elements (6a, 6b) and are designed to produce a symmetrical clamping force and to hold the package (1) together.

BEST AVAILABLE COPY